

Claims

1. A method for producing a granulate from waste glass for the purposes of manufacturing mineral wool products obtainable with the aid of at least one spinner having the form of a spinner basket, the peripheral wall of which includes a multiplicity of small-diameter outlet orifices through which a molten glass material is spun off in the form of filaments that are subjected to a supplementary attenuating action of a downwardly directed gas flow, wherein part of the molten glass material freighted with impurities on the basis of ceramic, stone and porcelain (CSP impurities) and passing through the spinner basket is formed of glass material with foreign matter proportions in ground form; and
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wherein the waste glass having been crushed and freed from rough impurities is ground by milling the glass materials against each other, and sieved, so that the oversize particles occurring in sieving are furthermore milled in a cycle until even the CSP impurities have a granulometry the same as or smaller than the smallest diameter of the outlet orifices in the peripheral wall of the spinner, without the CSP impurities having to be separated out.
2. The process according to claim 1, characterized in that it has the form of a glass-on-glass grinding process.
3. The process according to claim 1 or 2, characterized in that it has the form of a two-stage grinding process including a first rough grinding stage and a second fine grinding stage.
4. The process in accordance with any one of claims 1 to 3, characterized in that the glass material, in particular glass fragments, impacts inside the mill on a horizontally positioned milling rotor that accelerates the broken glass to velocities of approx. 40 - 50 m/s;

the formed particles are flung outside the milling rotor into an impact chamber to be further comminuted by the impact on already existing grinding stock;

5 finely ground waste glass is sieved out; and the occurring oversize particles of glass and CSP impurities are resupplied to the mill together with fresh grinding stock.

10 5. The process in accordance with any one of claims 1 to 4, characterized in that a centrifugal or rotating mill is used as the mill.

15 6. The process in accordance with any one of claims 4 or 5, characterized in that the impact chamber also contains waste glass material.

20 7. The process in accordance with any one of claims 1 to 6, characterized in that in particular hollow glasses containing foreign substances, such as bottles and glasses from communal collection facilities, serve as waste glass material.

25 8. The process in accordance with any one of claims 1 to 6, characterized in that in particular flat glasses containing foreign substances, such as float glass, borosilicate glass, etc. serve as waste glass.

9. The process in accordance with any one of claims 1 to 8, characterized in that the granulometry of the ground waste glasses including CSP impurities corresponding to the diameter of the outlet orifices in the peripheral wall of the spinner is approx. 0.1-2 mm, preferably approx. 0.3-1.5 mm, in a particularly preferred manner approx. 0.6-1.1 mm.

30 10. Use of a waste glass granulate obtainable in accordance with a method in accordance with at least one of claims 1 to 9, for manufacturing mineral wool products obtainable with the aid of at least one spinner having the form of a spinner basket, the peripheral wall of which includes a multiplicity of small-diameter outlet orifices through which a molten glass material is spun off in the form of filaments that are

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subjected to a supplementary attenuating action of a downwardly directed gas flow, wherein

5 the waste glass granulate replaces at least part of the raw material for the molten glass material.

11. Use according to claim 10, characterized in that the granulometry of the waste glass granulate corresponding to the diameter of the outlet orifices in the peripheral wall of the spinner is approx. 0.1-2 mm, 10 preferably approx. 0.3-1.5 mm, in a particularly preferred manner approx. 0.6-1.1 mm.

12. Use according to claim 10 or 11, characterized in that the proportion of the waste glass granulate is approx. 10 to 90%, especially 10 to 80% 15 (wt.), preferably approx. 30 to 75% (wt.).

13. Use in accordance with any one of claims 10 to 12, characterized in that the molten glass material contains a proportion of waste glass granulate from communal collection facilities and a proportion of waste 20 glass free from foreign substances, in particular flat glass.

14. Waste glass granulate obtainable in accordance with a method in accordance with at least one of claims 1 to 9, for use in manufacturing mineral wool products obtainable with the aid of at least one spinner 25 having the form of a spinner basket, the peripheral wall of which includes a multiplicity of small-diameter outlet orifices through which a molten glass material is spun off in the form of filaments that are subjected to a supplementary attenuating action of a downwardly directed gas flow,

30 wherein the granulometry of the granulate is inferior or equal to 1.2 mm, especially 1.1 mm, preferably not greater than 0.6 to 1.1 mm.